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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/547,904	10/25/95	SEKIYA	T 2271/45006-A

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MM42/0907

EXAMINER

NGUYEN, J

ART UNIT PAPER NUMBER

2861

30

DATE MAILED: 09/07/99

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 30

Application Number: 08/547,904
Filing Date: 10/25/95
Appellant(s): SEKIYA, Takuro

Richard F. Jaworski
For Appellant

EXAMINER'S ANSWER

MAILED

SEP 07 1999

GROUP 2800

This is in response to appellant's brief on appeal filed 6/29/99.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

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A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 1 and 3-5 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

Art Unit: 2861

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

5,245,361	KASHIMURA et al	9-1993
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4,931,811	COWGER et al	6-1990
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(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 3-5, 9, 12 are rejected under 35 U.S.C. 103(a). This rejection is set forth in prior Office action, Paper No. 23.

(11) Response to Argument

Appellant pointed to the recitation at col.1, lines 17-23 of Kashimura and argued that Kashimura recognized in the prior art a disposable ink jet recording head comprising internally integrated combination of an ink tank and a head element.

This argument is irrelevant to the rejection because the aforementioned recitation is directed to prior art recognized by Kashimura, not the teaching of Kashimura.

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Appellant argued that no teaching could be found in Kashimura that the recording head unit is detachable from the ink reservoir.

The examiner disagreed. Kashimura teaches that in connecting the head 311 and the ink tank 312, the head is urged into the ink tank as shown by arrow A in Fig. 17, at this point, "the wall portion provided with the opening 312b of the ink tank 312 is expanded outwardly due to engagement of the projection 311b" (col. 18, lines 1-3). One of ordinary skill in the art would conclude that since the wall can expanded outwardly to due to engagement, it would certainly can expanded outwardly to allow disengagement.

Appellant argued that no teaching could be found in Kashimura that the recording head unit is including electrode contacts.

The examiner disagreed. Kashimura's recording head unit including an ink tank detachably attached to the recording head unit to form a single unit whereby the electrode contacts are carry thereon. Hence, the electrode contacts are indirectly carried on the recording head unit. It is noted that appellant's claimed electrode contacts are directly carried on the recording

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head unit which is distinguished over Kashimura. However, such directly-carried-on feature has not been recited in the claim. Furthermore, in amending in response to a rejection of claims in an application, the appellant must clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited. He or she must also show how the amendments avoid such references {see section 1.111© of Patent Rules}. Furthermore, in rejecting claims the examiner may reply upon admissions by the appellant as to any matter affecting patentability {see section 1.104(c)(3)}. Therefore, since appellant has never argued the aforementioned feature before, it is considered appellant's own admissions that the aforementioned feature is well known in the art, particularly, since it is taught by one of the cited references in the file (Kurata et al (5,138,342); see particularly Figs. 3 and 7, elements 507 and 512).

Appellant argued that no teaching could be found in Cowger that removing a seal member such that the interior space of the ink reservoir communicates directly with an exterior of the ink reservoir via the vent.

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The examiner disagreed. Cowger clearly teaches by illustration (see Figure 1) that the interior space of the ink reservoir communicates directly with an exterior of the ink reservoir via the vent 30. With respect to the removable seal member, this feature is inherent for the following reason. It is well known in the art that during shipping the openings of the ink reservoir including an air vent opening needs to be sealed so that ink will not leak out of the reservoir through the openings due to the pressure changes in the reservoir by the movement of the reservoir. And during operation, the seal has to be removed to allow air communication between the reservoir and the atmosphere as clearly illustrated by Cowger. Furthermore, in amending in response to a rejection of claims in an application, the appellant must clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited. He or she must also show how the amendments avoid such references (see section 1.111© of Patent Rules). Furthermore, in rejecting claims the examiner may reply upon admissions by the appellant as to any matter affecting patentability (see section 1.104(c)(3)). Therefore, since appellant has never argued the aforementioned feature before, it is considered appellant's own admissions that the aforementioned

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feature is well known in the art, particularly, since it is taught by the attached reference (Wada (JP 5-162326)); see particularly elements 10 and 7).

Appellant further, under item (A), describing Figure 17 of Kashimura and explaining how that Figure illustrated a permanent joining of the ink tank and the ink jet head.

However, as explained above, Kashimura teaches that in connecting the head 311 and the ink tank 312, the head is urged into the ink tank as shown by arrow A in Fig. 17, at this point, "the wall portion provided with the opening 312b of the ink tank 312 is expanded outwardly due to engagement of the projection 311b" (col. 18, lines 1-3). One of ordinary skill in the art would conclude that since the wall can expanded outwardly to due to engagement, it would certainly can expanded outwardly to allow disengagement. Just because Kashimura was not explicitly indicated that the recording head unit and the ink reservoir unit detachable from each other does not mean that they are permanently joined to each other as indicated by the appellant. In addition, it is notorious well known in the art to have the head and the ink tank detachable from each other as also

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shown in the attached reference of Wada (see particularly Figure 8).

Appellant further, under items B and C, argued that the cited art does not suggest providing electrode contacts on the recording head unit and a vent including a removable seal means.

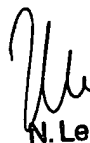
These argued are basically same as the argument previously presented which the examiner has responded as set forth above.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Judy Nguyen
September 3, 1999



N. Le
Supervisory Patent Examiner
Technology Center 2800

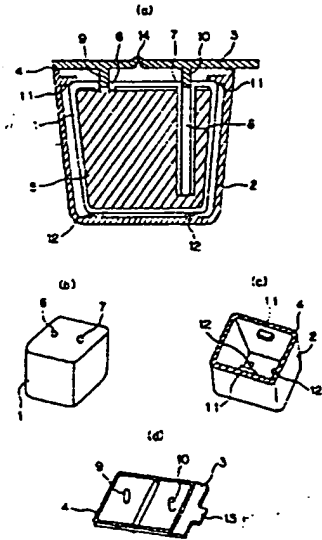
Cooper & Dunham
1185 Avenue of the Americas
New York, NY 10036

see 3.23 for
translation**(54) INK CARTRIDGE**

(11) 5-162326 (A) (43) 29.6.1993 (19) JP
 (21) Appl. No. 3-327718 (22) 11.12.1991
 (71) CANON INC (72) SHUNEI WADA
 (51) Int. Cl⁸. B41J2/175

PURPOSE: To prevent the flying-out of ink or the mixing of the ink with air by making the pressure in the air chamber provided in an ink cartridge same to atmospheric pressure by incorporating a mechanism releasing an atmosphere communication port at first when the package protecting the ink cartridge is opened and subsequently releasing an ink supply port in the package.

CONSTITUTION: When a package is opened, a user raises the projection 13 unified with a second package 3 in the direction shown by an arrow. When the projection is further raised in the same direction, the connection part 4 of first and second packages 2, 3 is separated. At this time, both packages are broken at the connection part 4 because a notch 14 is provided to the second package 3 and temporarily prevented from separation. At this time, the pin-shaped sealing member 10 closing an atmosphere communication port 7 is detached and the pressure of air in an ink cartridge 1 equals the atmospheric pressure.



(51)Int.Cl.⁵

識別記号

庁内整理番号

F I

技術表示箇所

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8306-2C

B 4 1 J 3/04

1 0 2 Z

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(71)出願人 000001007

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ノン株式会社内

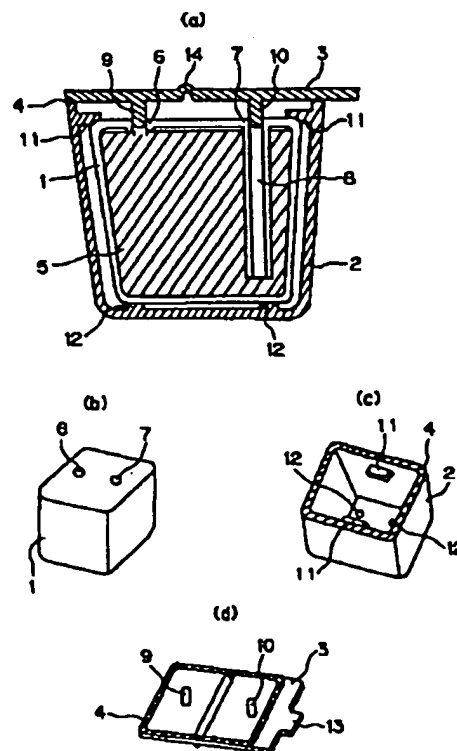
(74)代理人 弁理士 若林 忠

(54)【発明の名称】 インクカートリッジ

(57)【要約】

【目的】 パッケージからインクカートリッジを取出す時に、カートリッジ内の気圧を外気圧と同じにして、気圧差によるインク供給口からのインク飛出し、あるいは空気の混入を防ぎ、印字装置がインクで汚れたり印字不能になることを防ぐ。

【構成】 液体のインクを用いる印字装置のインクカートリッジにおいて、このカートリッジは外部との連絡口を少なくとも2個持ち、インクカートリッジは使用前時、第一と第二の少なくとも2個のパッケージによって保護され、前記連絡口は第一あるいは第二のパッケージのいずれかで密閉され、使用時、第一又は第二のパッケージを開封時、前記カートリッジの連絡口が必ず所定の順番で時間差をもって開封されることを特徴とする。



ッジを入れた状態で、第一のパッケージを密閉する第二のパッケージの、少なくとも二つのパッケージによって保護され、このとき前記インクカートリッジの連絡口は、前記第一のパッケージあるいは第二のパッケージのいずれかで密閉され、使用時、第一あるいは第二のパッケージを開封時、前記カートリッジの連絡口は必ず所定の順番で時間差をもって開封されることを特徴とする。

【0012】

【実施例】以下に実施例に沿って説明する。

【0013】図10は本実施例に関する記録装置を組み込んだ情報処理装置604の外観を表わす模式的斜視図である。

【0014】図10において、601は上述のプリンタ部、602は文字や数字およびその他のキャラクタを入力するためのキーや、各種指令を与えるためのキーなどを備えたキーボード部、603は表示器を備える表示部である。

【0015】なお、他に上記の電気回路に電力を供給するための電源部があり、これには例えば充電式のバッテリーや、使い捨ての乾電池、あるいは情報処理装置本体を固定して使用する場合のAC電源用交換器などがある。

【0016】〔実施例1〕図1は本発明の第1の実施例を示した説明図である。

【0017】(a)は、インクカートリッジ及びパッケージ全体の断面図。

【0018】(b)は、カートリッジと外部連絡口を示す斜視図。

【0019】(c)は、第一のパッケージとカートリッジ押え部材を示す斜視図。

【0020】(d)は、第二のパッケージの接合面の斜視図を夫々示す。

【0021】1はインクカートリッジ、2は第一のパッケージ、3は第二のパッケージで、第一のパッケージ2と第二のパッケージ3は、接合部4で分離可能に接合し、密閉している。5はインクを供給する保持部材で、多孔質のスポンジ等が用いられる。6はヘッドにインクを供給する供給口、7はインクを供給した後の空間に大気を導く大気連通口で、大気連通口7は空気室8を持つ。

【0022】第二のパッケージ3には、上記二つの穴を密閉するためのピン状密閉部材9、10があり、第一のパッケージ2を第二のパッケージで密閉したとき、各穴を密閉するようになっている。二つのピン状密閉部材9、10の間には、切れ込み14があり、この部分は容易に折れるようになっている。

【0023】11はインクカートリッジを押える押え部材で、座12の上に乗ったインクカートリッジ1がガタつかないように押えている。押え部材11及び座12は第一のパッケージ2と一体でできている。

【0024】第一のパッケージ2及び第二のパッケージ3は共にプラスチック等の弾性部材で作られている。

【0025】13は第二のパッケージ3と一体の突起で第一のパッケージ2を第二のパッケージ3で密閉したとき、この部分のみ突起する。

【0026】この状態で物流を行う。

【0027】次に、印字装置使用者が、パッケージを開封する手順を図2に示す。

【0028】(a)に示すように、使用者がパッケージを開封する場合、第二のパッケージ3と一体の突起13を矢印の方向へ持ち上げる。

【0029】突起13以外に第二のパッケージを取るための手で持てる場所はないので、誰が開封してもこの部分からの開封となる。

【0030】次に(b)に示すようにさらに矢印方向へ持ち上げると第一のパッケージ2と第二のパッケージ3の接合部4が分離する。このとき第二のパッケージ3には、切れ込み14があるためこの部分で折れ、一時的に分離が止まる。

【0031】この時、大気連通口7を塞いでいるピン状密閉部材10が外れ、インクカートリッジ1内の空気は外気圧と同等となる。

【0032】更に(c)に示すように、矢印方向へ持ち上げると、残りの接合部4が分離して、第一のパッケージ2と第二のパッケージ3は完全に分離する。このときインク供給口6を塞いでいるピン状密閉部材9も外れ、インクカートリッジ1の二つの穴は両方とも解放される。このとき、押え部材11は各穴から密閉部材が外れるときの力よりも大きな力でインクカートリッジ1を押えているので、インクカートリッジ1は不用意に第一のパッケージ2からはずれることはない。

【0033】このような構成で常に空気が満たされている大気連通口7、インクが満たされているインク供給口6の順で、時間差を持って開封することができ、インクカートリッジ1内の空気圧と外気圧に差があっても、インクカートリッジ1内の空気圧を外気圧と同等にでき、インクが外へ飛び出したり、インク供給口6へ空気が入り込むことはない。

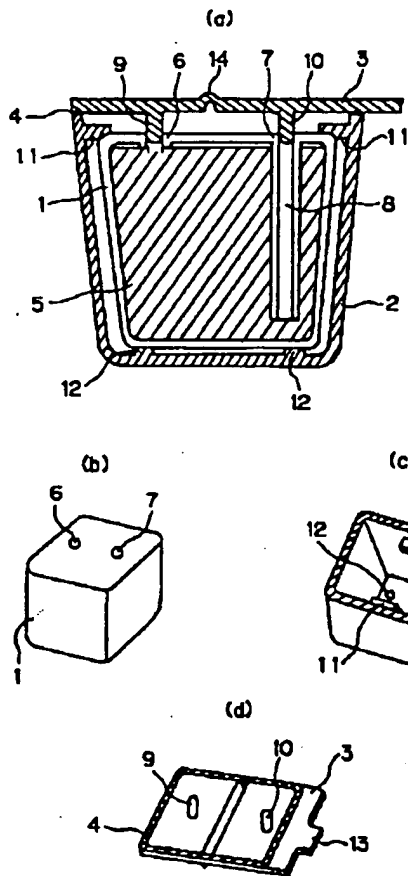
【0034】〔実施例2〕図3は本発明の第2の実施例を示す。

【0035】この場合、(a)に示すように大気連通口を塞ぐ密閉部材32は第二のパッケージ31に直接結合しているが、インク供給口を塞ぐ密閉部材33は、弾性部材34を介して第二のパッケージと結合している。このため、(b)に示すように、第一の実施例と同様第二のパッケージの突起部35を矢印方向へ持ち上げ開封したとき、第二のパッケージに直接ついた大気連通口側の密閉部材32は、第二のパッケージと伴って大気連通口から外れるが、インク供給口側の密閉部材33は弾性部材34の弾性力が密閉部材の密閉力を上回るまで外れな

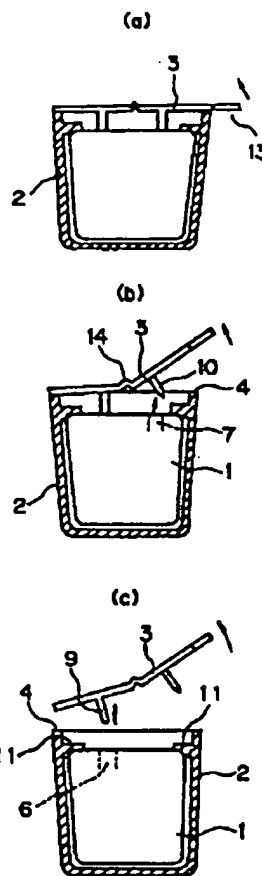
- 4 接合部
 5 保持部材
 6, 64 インク供給口
 7, 63 大気連通口
 8, 75 空気室
 9, 10, 32, 33, 37, 38 密閉部材
 11 押え部材

- 12 座
 13, 35 突起
 14 切れ込み
 34, 36 弾性部材
 39, 40 テープ状弾性材
 52, 62 インクヘッド

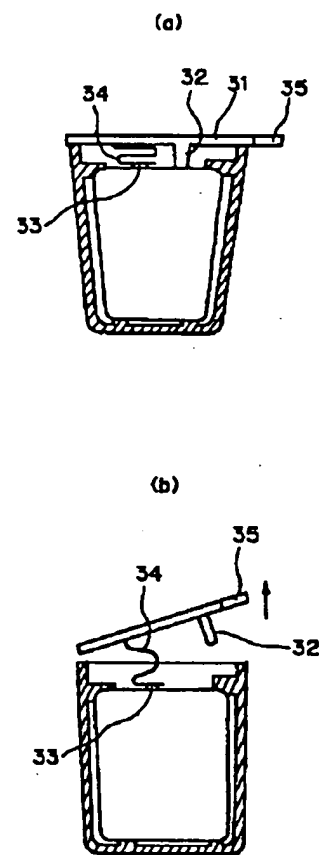
【図1】



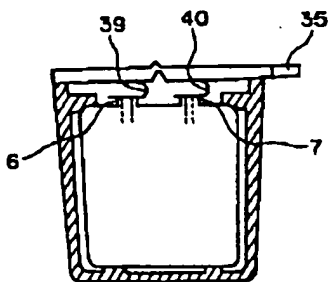
【図2】



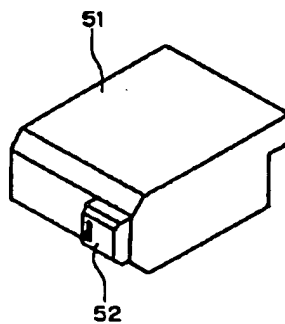
【図3】



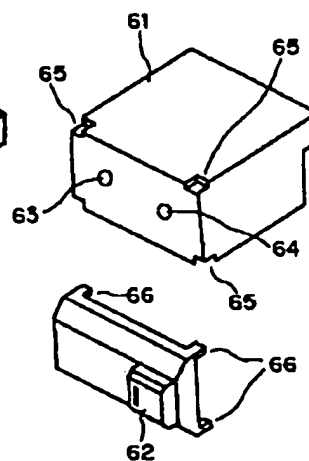
【図6】



【図7】



【図8】



【図9】

